



Digital Biomechanics

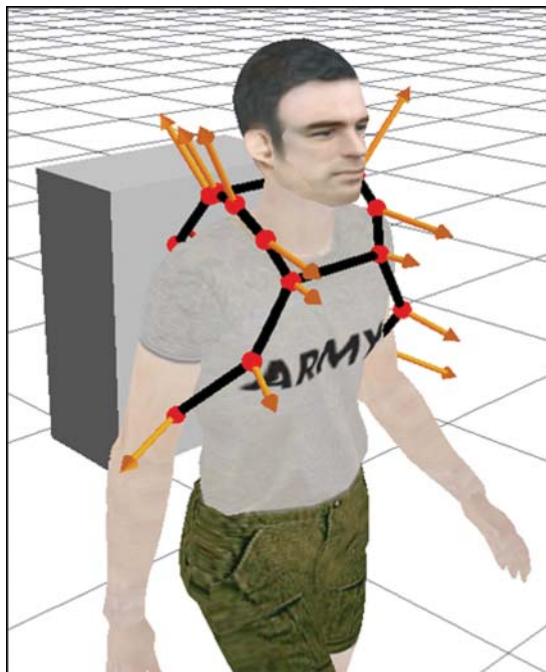
Phase III IMPACTS



Digital Biomechanics™ is the first physics-based human simulation to model equipment on soldiers engaged in actual tasks, from walking, running, and crawling to completing a virtual obstacle course. This technology uses robot-control technology and physics-based models to provide human simulation that obey the same laws of locomotion, balance, and loading as real people do in the physical world. Researchers at the U.S. Army's Research Institute for Environmental Medicine (USARIEM) and Natick Soldier Center is using Digital Biomechanics™ to improve the design process for helmets, body armor, backpacks, and other warrior equipment. It is used to assess the impact of prototype designs on soldier performance before

building physical mock-ups and testing on live soldiers, thereby shortening design/test cycles and reducing design costs and risk to personnel.

Digital Biomechanics™ is currently used by a variety of customers, both military and commercial. Sony Corporation is using Digital Biomechanics™ to engineer advanced behavior in its humanoid entertainment robots. Sarcos Corporation is relying on Digital Biomechanics™ to design and analyze an advanced robotic exoskeleton being funded by the Defense Advanced Research Projects Agency.



- Digital Biomechanics™ received \$5.275M in post-SBIR funding, including ongoing funding from the U.S. Army Natick Soldier Center and from the Objective Force Warrior acquisition program.
- The U.S. Marines will use Digital Biomechanics™ for their Integrated Infantry Combat System program in FY04.
- Working with USARIEM to validate Digital Biomechanics™ against live biomechanical data recorded from active-duty soldiers in load carriage studies.